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(71) Applicant: SUMITOMO ELECTRI

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IKEGAYA AKIHIKO

(74) Representative:

**(54) WC BASE CEMENTED
CARBIDE AND ITS
PRODUCTION**

(57) Abstract:

PROBLEM TO BE SOLVED: To produce a WC base cemented carbide most suitable as a substitute for a coating tool as a tool material for cutting and to provide a method therefor.

SOLUTION: In a sintered alloy composed of hard phases of carbide, nitride and carbonitride contg. W and Ti as essential component, at least one kind among Mo, V, Nb, Ta, Zr and Hf and N(nitrogen) and C(carbon) by 75 to 95wt.%, and the balance a binding phase essentially consisting of iron group metal with inevitable impurities, the content of W in the sintered alloy is regulated to 60 to 90wt.% expressed in terms of WC, the content of Ti is regulated to 3 to 30wt.% expressed in terms of TiN or TiN and TiC, the total content of Mo, V, Nb, Ta, Zr and Hf is

regulated to 0.5 to 10wt.% expressed in terms of Mo₂C, VC, NbC, TaC, ZrC and HfC, a carbonitride layer having 5 to 15μm thickness is present on the surface, the layer is composed of mutual solid solution consisting of all of the metallic components in the hard phases contained in the alloy, N and C, and the surface roughness regulated to ?1.5μm by Ra.

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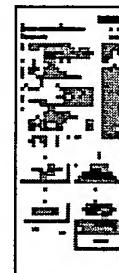
Title: [JP10237650A2: WC BASE CEMENTED CARBIDE AND ITS PRODUC](#)

Country: JP Japan

Kind: A

Inventor: TSUDA KEIICHI;
IKEGAYA AKIHIKO;

Assignee: SUMITOMO ELECTRIC IND LTD
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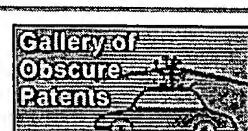
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